

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 7,110,390 B1
APPLICATION NO. : 09/294475
DATED : September 19, 2006
INVENTOR(S) : Kevin Gatesman et al.

Page 1 of 7

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Delete the title page and substitute therefore the attached title page consisting of the corrected illustrative figure and number of drawing sheets in patent.

Delete Drawing Sheets 1-6 and substitute therefore the attached Drawing Sheets 1-5. FIGS. 1-4 have been substituted with replacement FIGS. 1-4.

This certificate supersedes the Certificate of Correction issued August 14, 2012.

Signed and Sealed this
Fourth Day of September, 2012

A handwritten signature in black ink that reads "David J. Kappos". The signature is written in a cursive, flowing style with a large initial "D" and a stylized "K".

David J. Kappos
Director of the United States Patent and Trademark Office

(12) **United States Patent**
Gatesman

(10) **Patent No.:** **US 7,110,390 B1**
(45) **Date of Patent:** **Sep. 19, 2006**

(54) **COMMUNICATION CONTROLLER FOR PROVIDING MULTIPLE ACCESS USING A SINGLE TELEPHONE LINE**

FOREIGN PATENT DOCUMENTS

WO	97/46073	* 12/1997
WO	97/47127	* 12/1997
WO	98/37665	8/1998

(75) Inventor: **Kevin Gatesman**, Fairfax, VA (US)

(73) Assignee: **MCI, Inc.**, Ashburn, VA (US)

OTHER PUBLICATIONS

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 546 days.

Hansson et al., "Phone Doubler: A Step Towards Integrated Internet and Telephone Communities", On--Ericsson Review, Ericsson, Stockholm, SE, No. 4, 1997, pp. 142-151.

* cited by examiner

(21) Appl. No.: **09/294,475**

Primary Examiner Steven Nguyen

(22) Filed: **Apr. 20, 1999**

(57) ABSTRACT

(51) **Int. Cl.**

H04L 12/66 (2006.01)

H04L 12/28 (2006.01)

(52) **U.S. Cl.** **370/352; 370/401; 370/466**

(58) **Field of Classification Search** **370/351-356, 370/400-402, 473-466; 379/88.17, 900, 379/215.01; 709/265**

See application file for complete search history.

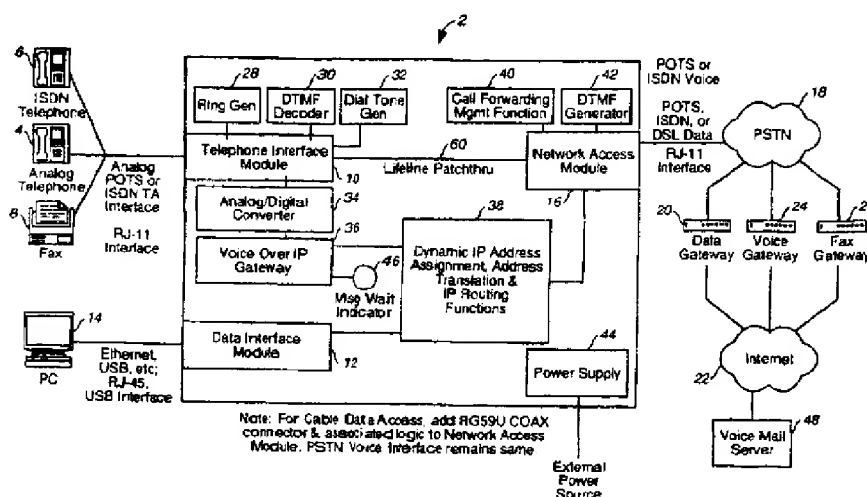
(56) References Cited

U.S. PATENT DOCUMENTS

5,793,763	A *	8/1998	Mayes et al.	370/401
5,946,384	A *	8/1999	Yee et al.	379/215.01
6,028,848	A	2/2000	Bhatia et al.	
6,058,431	A *	5/2000	Srisuresh et al.	709/245
6,067,353	A *	5/2000	Szeliga	379/215.01
6,108,330	A *	8/2000	Bhatia et al.	370/352
6,295,293	B1 *	9/2001	Tonnby et al.	370/351
6,320,857	B1 *	11/2001	Tonnby et al.	370/352
6,353,614	B1 *	3/2002	Borella et al.	370/401
6,385,194	B1 *	5/2002	Surprenant et al.	370/353
6,449,251	B1 *	9/2002	Awadallah et al.	370/465
6,452,923	B1 *	9/2002	Gerszberg et al.	370/352
6,456,625	B1 *	9/2002	Itoi	370/401
6,515,996	B1 *	2/2003	Tonnby	370/352

Instead of having to subscribe to multiple telephone lines for multiple devices that a user has, a module of the present invention can connect each of the user's devices to an outside communications network using the same telephone line. Such multiple inside connections to the outside communication network using the same telephone line is achieved by provisioning within the invention module the appropriate telephone and computer interface units for the user's telephones and computers, and an appropriate network interface unit for connection to the telephone line that connects the invention module to the external communications network. The module of the instant invention is further provisioned with an IP routing submodule that communicatively connects the various interface units together by managing the addressing of the data that traverses between the outside network and the devices of the user, by routing the appropriate data packets to the appropriate devices by means of pseudo internal IP addresses assigned to the various devices of the user. Other components within the module convert those data packets that are a part of a voice signal into the appropriate analog signal for output to the telephone of the user. Conversely, such components convert any analog input from the user into a corresponding digital signal that is packetized and output to the external communications network.

29 Claims, 5 Drawing Sheets



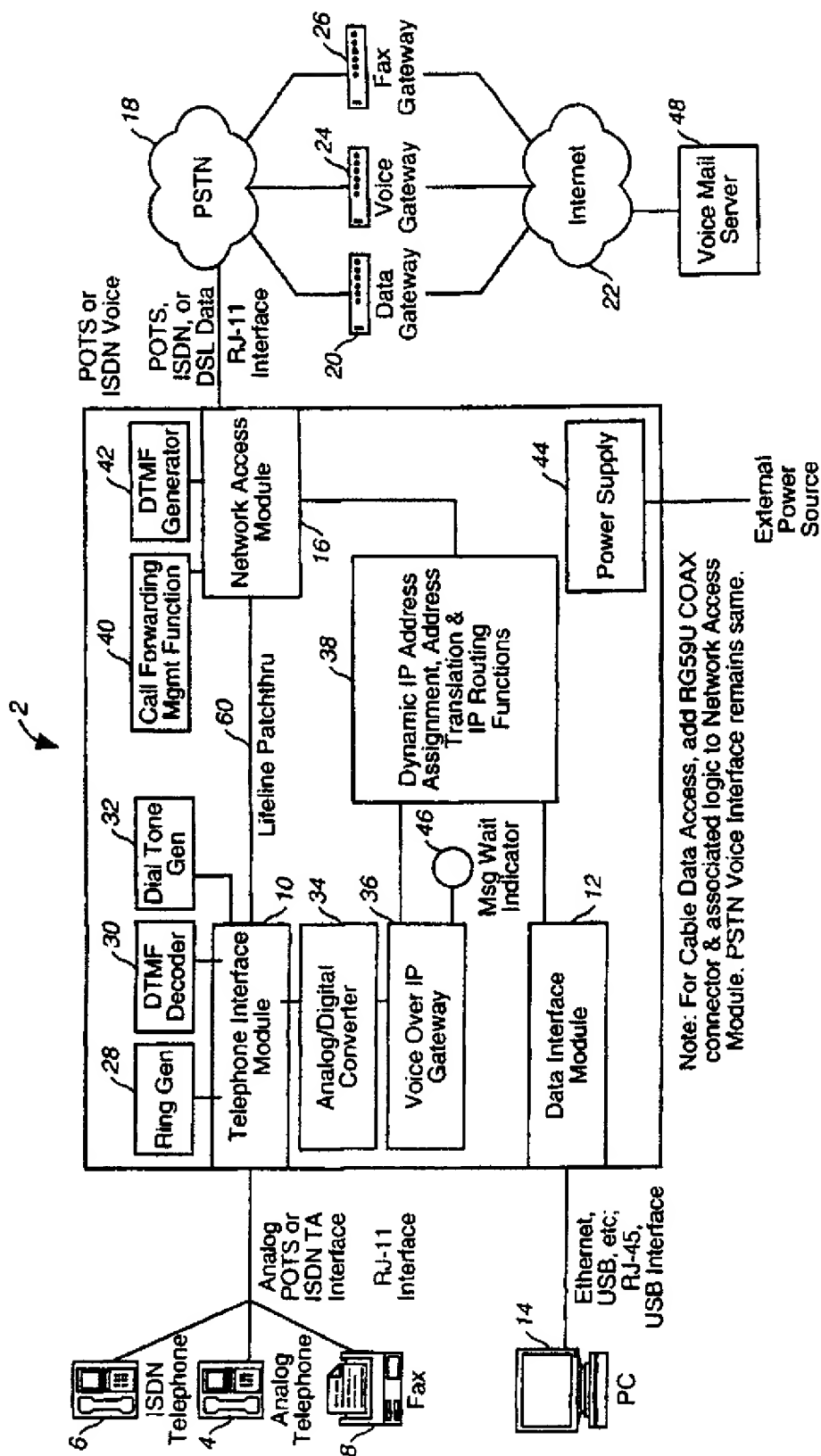
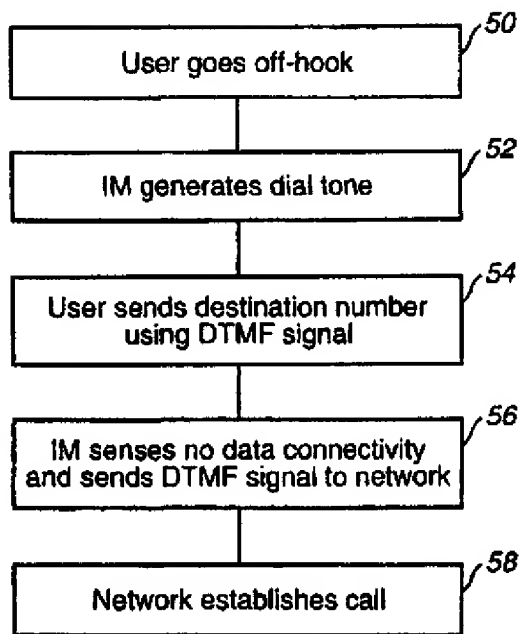
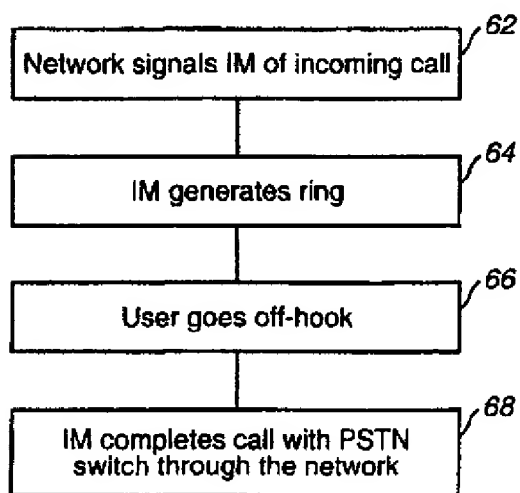


FIG. 1

**FIG. 2****FIG. 3**

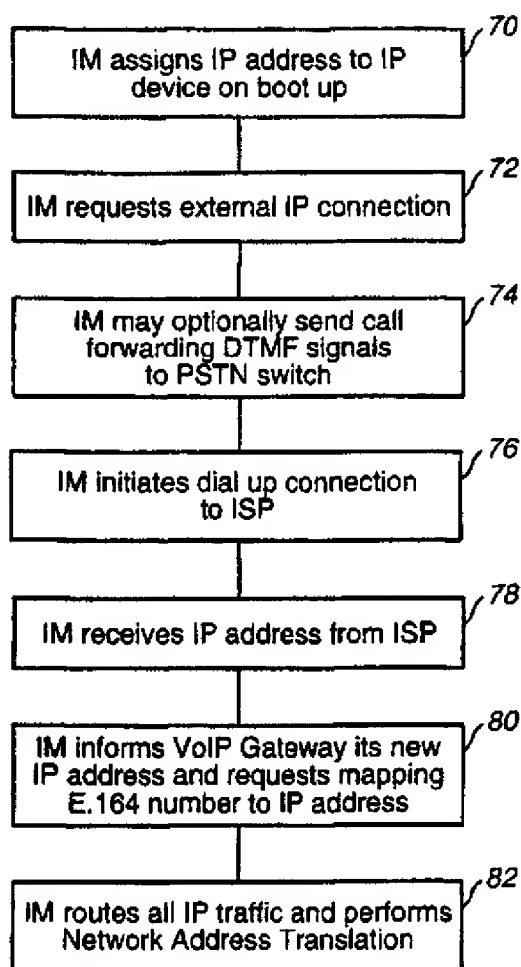
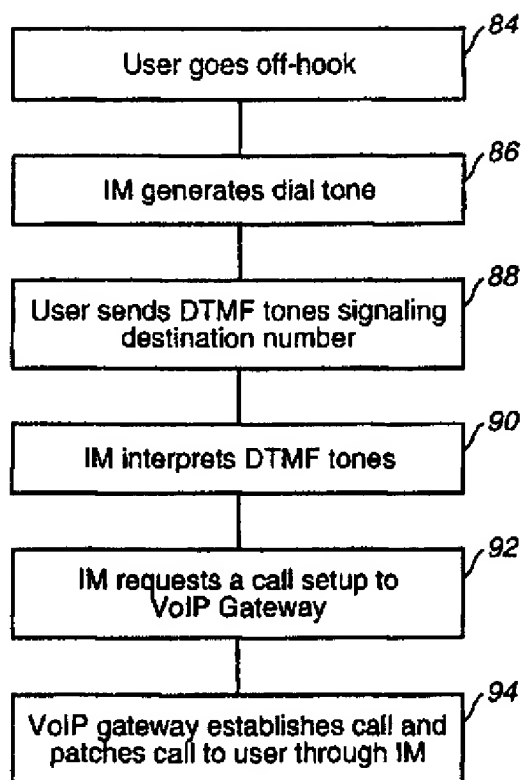
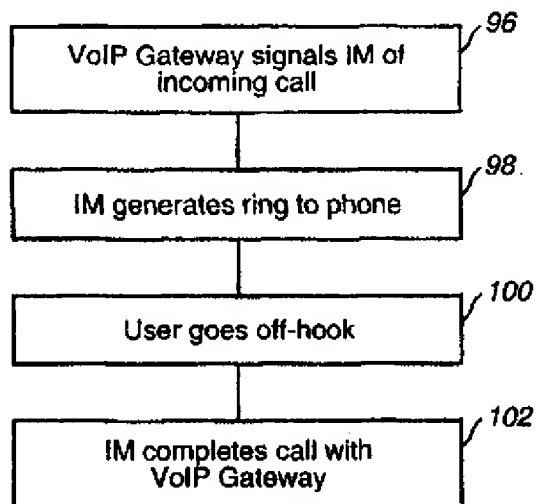
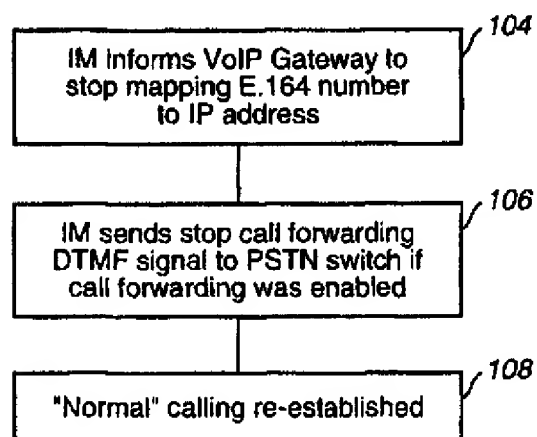


FIG. 4

**FIG. 5**

**FIG. 6****FIG. 7**